



1645

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/889,866A

DATE: 05/13/2002
 TIME: 14:59:57

Input Set : A:\MWH0008rev.APP.txt
 Output Set: N:\CRF3\05132002\I889866A.raw

3 <110> APPLICANT: Genaissance Pharmaceuticals, Inc.
 4 Denton, R. Rex
 5 Kliem, Stefanie E.
 6 Nandabalan, Krishnan
 7 Stephens, J. Claiborne
 9 <120> TITLE OF INVENTION: DRUG TARGET ISOGENES: POLYMORPHISMS IN THE
 10 IMMUNOGLOBULIN E RECEPTOR BETA CHAIN GENE
 12 <130> FILE REFERENCE: MWH-0008US IGERB
 14 <140> CURRENT APPLICATION NUMBER: US 09/889,866A
 C--> 15 <141> CURRENT FILING DATE: 2001-07-20
 17 <150> PRIOR APPLICATION NUMBER: 60/150,423
 18 <151> PRIOR FILING DATE: 1999-08-24
 20 <150> PRIOR APPLICATION NUMBER: PCT/US00/22175
 21 <151> PRIOR FILING DATE: 2000-08-11
 23 <160> NUMBER OF SEQ ID NOS: 145
 25 <170> SOFTWARE: PatentIn Ver. 2.1 PLUS editing text file in Notepad
 27 <210> SEQ ID NO: 1
 28 <211> LENGTH: 11298
 29 <212> TYPE: DNA
 30 <213> ORGANISM: Homo sapiens
 32 <220> FEATURE:
 33 <221> NAME/KEY: unsure
 34 <222> LOCATION: (2966)
 35 <223> OTHER INFORMATION: Nucleotide identity unknown
 37 <220> FEATURE:
 38 <221> NAME/KEY: unsure
 39 <222> LOCATION: (2994)
 40 <223> OTHER INFORMATION: Nucleotide identity unknown
 42 <220> FEATURE:
 43 <221> NAME/KEY: unsure
 44 <222> LOCATION: (3498)
 45 <223> OTHER INFORMATION: Nucleotide identity unknown
 47 <220> FEATURE:
 48 <221> NAME/KEY: unsure
 49 <222> LOCATION: (3568)
 50 <223> OTHER INFORMATION: Nucleotide identity unknown
 52 <220> FEATURE:
 53 <221> NAME/KEY: unsure
 54 <222> LOCATION: (3621)
 55 <223> OTHER INFORMATION: Nucleotide identity unknown
 57 <220> FEATURE:
 58 <221> NAME/KEY: unsure
 59 <222> LOCATION: (3627)

RECEIVED

MAY 24 2002

TECH CENTER 1800/2900

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/889,866A

DATE: 05/13/2002

TIME: 14:59:57

Input Set : A:\MWH0008rev.APP.txt

Output Set: N:\CRF3\05132002\I889866A.raw

```

60 <223> OTHER INFORMATION: Nucleotide identity unknown
62 <220> FEATURE:
63 <221> NAME/KEY: unsure
64 <222> LOCATION: (3665)
65 <223> OTHER INFORMATION: Nucleotide identity unknown
67 <220> FEATURE:
68 <221> NAME/KEY: unsure
69 <222> LOCATION: (3684)
70 <223> OTHER INFORMATION: Nucleotide identity unknown
72 <220> FEATURE:
73 <221> NAME/KEY: unsure
74 <222> LOCATION: (3686)
75 <223> OTHER INFORMATION: Nucleotide identity unknown
77 <220> FEATURE:
78 <221> NAME/KEY: unsure
79 <222> LOCATION: (3764)
80 <223> OTHER INFORMATION: Nucleotide identity unknown
82 <220> FEATURE:
83 <221> NAME/KEY: unsure
84 <222> LOCATION: (3772)
85 <223> OTHER INFORMATION: Nucleotide identity unknown
87 <220> FEATURE:
88 <221> NAME/KEY: unsure
89 <222> LOCATION: (3810)
90 <223> OTHER INFORMATION: Nucleotide identity unknown
92 <220> FEATURE:
93 <221> NAME/KEY: unsure
94 <222> LOCATION: (3847)
95 <223> OTHER INFORMATION: Nucleotide identity unknown
97 <220> FEATURE:
98 <221> NAME/KEY: unsure
99 <222> LOCATION: (4293)
100 <223> OTHER INFORMATION: Nucleotide identity unknown
102 <220> FEATURE:
103 <221> NAME/KEY: unsure
104 <222> LOCATION: (10723)
105 <223> OTHER INFORMATION: Nucleotide identity unknown
107 <220> FEATURE:
108 <221> NAME/KEY: unsure
109 <222> LOCATION: (11235)
110 <223> OTHER INFORMATION: Nucleotide identity unknown
114 <400> SEQUENCE: 1
115 aagcttttca aaggtgcaat tggataactt ctgccatgag aaatggctga attgggacac 60
116 aagtggggac aattccagaa gaagggcaca tctctttctt ttctgcagtt ctttctcacc 120
117 ttctcaactc ctactaaaat gtctcatttt cagggttctgt aaatcctgct agtctcaggc 180
118 aaaattatgc tccaggagtc tcaaattttc ttatttcata ttagtcttta ttagtagac 240
119 ttctcaattt ttctattcat cacaagtaaa agcctgttga tcttaatcag ccaagaaact 300
120 tatctgtctg gcaaatgact tatgtataaa gagaatcatc aatgtcatga ggtaacccat 360
121 ttcaactgcc tattcagagc atgcagtaag aggaaatcca ccaagtctca atataataat 420

```

RAW SEQUENCE LISTING

DATE: 05/13/2002

PATENT APPLICATION: US/09/889,866A

TIME: 14:59:57

Input Set : A:\MWH0008rev.APP.txt

Output Set: N:\CRF3\05132002\I889866A.raw

```

122 attcttttatt cctggacagc tcggttaagt aaaaaatgga cacagaaagt aataggagag 480
123 caaatcttgc tctcccacag gagccttcca ggtaggtaca aggtattatt tttttctacc 540
124 ctcaagtcaact tgtggcaggg gaagtcatag tcacggtgct taggagatga aactttattg 600
125 atttaggcat ggatccatct agtttaatta atatattggg tatgagggaag ctacttgctg 660
126 tactttccat gtggttctct ctccctggag aggaacattt ttactcagct tgcaaactgg 720
127 aaatagattht tctcacatta gaagctcatt ttctgggtat gagacaggag agttcatact 780
128 gtgtatgtag atctctggct tctgggtctg acatgtgctg agggacacat atccttcaca 840
129 catgctttta taaataactg ataaagtaac ctgcttcttg attggtcttt ataatccata 900
130 agctgtggga tgcttctctg aagatgaaaa tagtaataga gtcccatcta gctattcaaa 960
131 gccattcctt cattgtattc tgtgcacatg aagttggggt ttgttactga caaaatata 1020
132 tcagatacat ttctatgtta aaaggattgt gagatgcata ggtaaatgtg tttattttca 1080
133 gttttacttg tcaacataga tgaatgagaa agaacttgaa agtaacactg gattaagaat 1140
134 aggaaaattht ggcatggatt ttgctccatt ttgtcccatc taatcacttg gatagtgttc 1200
135 aggtgttctt ggtcagttac ttggatgctc tgagctttag tttcttggtg attacaatga 1260
136 agatttgaat tacaggatgg ctttgaaaaa ataaacaaaa ctcccttttc tgtctgtcga 1320
137 gaatgttgca cagggagtta cagaatgttc tcatgactga attgctttta aatttcacag 1380
138 tgtgcctgca tttgaagtct tggaaatata tccccaggaa gtatcttcag gcagactatt 1440
139 gaagtcggcc tcatccccac cactgcatac atggctgaca gttttgaaaa aagagcagga 1500
140 gttcctgggg gtgagtgagc ctccctcaac tttgactaga gtaagggttg ggtctagaaa 1560
141 agaattatga gttgcatcaa ctgttttccc acttggtatc atgagaggtg ttaggtcctt 1620
142 taaaaaacat ggtagataaa gagttgacac taactgggtc cttttgggaa gagccagaag 1680
143 catttcctca taaagacttt aaattgctag gacgagaatg gccaacagga gtgaaggatt 1740
144 cataacttta tctttactta gatgtaaaga acaattactg atgttcaaca tgactacata 1800
145 cataaaggcg catggagaaa agtattggcc ttccatgcat taggtagtgc ttgtatcaat 1860
146 tcttatagtg gctaggggat cctggaaaaat cttacgtgtg gatcatttct caggacagtc 1920
147 taggacacta acgcagtttc tcatgttttg cttctattat taaaaaatga tacaatctcg 1980
148 ggaaaaattht tttgattttc atgaaattca tgtgtttttc tataggtaac acaaattctg 2040
149 actgctatga tatgcctttg ttttggaaca gttgtctgct ctgtacttga tatttcacac 2100
150 attgagggag acatthttttc atcatthtaa gcaggttatc cattctgggg agccatattt 2160
151 gtgagtatat atctataatt gtttctgaaa taacactgaa catagggttt tctctttctc 2220
152 agatctaacc agttgtttat tcccagtatt aagatgatat ttataattct taattataaa 2280
153 tatatgtgag catatataac atagatatgc tcattaacaa caacaaaaga ttctttttac 2340
154 aattaacggt ggggttaaaca tttagcccac agttttatcc catgagaaac ctgaatctaa 2400
155 tacaagttaa atgacttgcc taagggccac ttgactaata gtaattgaac ctaaactttc 2460
156 agaatccaac tccaggaaca tacttctagc actattcadc aataaagtta tatgataaat 2520
157 acatacaact ttatctgtca actaaaaata acaacagagg ctgggcatgg tggctcacac 2580
158 ccgtaatccc agcacttttg gaggctgagg cagggtggatc acctgagggtc aggagtttga 2640
159 gaccagcctg accaacatgg tgaaacctca tctctactaa atataaaaaa ttagctgagt 2700
160 gtgatagtgc atacctgtaa tccagctact taagaggctg aggcaggagg cttgtttgaa 2760
161 cctggaaggc agagggttga gtgagctgag attgtgccat tgcactccag cctgggcaat 2820
162 aagtgcgaac tctgtctcaa aataataata ataataatag aaaataaagt tgtcttcatg 2880
163 aaaaatgagg aaagagattg ctggggtgag aaacattaag atcaatgggc atatggtgac 2940
W--> 164 cttctatgcc ctagaaactc ttttanggtt ttttctctct gtatctcttt tacncatcgt 3000
165 tctatctgga aaaataggtg gatgagtgag ataataacgg tatatacttt ttaaaggctc 3060
166 aattgacata tataaattgc aagtatttca gatgtcaatt tgctaacctt gacacacata 3120
167 gacacacatg aaacatcac cacattaata caatgtatgt atccatcatt ccaaaagctt 3180
168 ccctgtgtat ctttgtaact ctttcttctt ccctccactc cttgtcctct cgttcccaag 3240
169 aaaacattga tctgtctcct gtgaatataa attaaacttac atttttttaga gctttatata 3300
170 agtatgttct ctttactgtt tgtcttctct cgctgcacag ttatttttag attcttcaag 3360

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/889,866A

DATE: 05/13/2002

TIME: 14:59:57

Input Set : A:\MWH0008rev.APP.txt

Output Set: N:\CRF3\05132002\I889866A.raw

```

171 ttttttcttt atatcgatc ttcattcaca agaatatatt ttaattctag actatgtcac 3420
172 attgactttg tcgtctgcta aatccttagt gctcagatga cttgttcagg actctccttg 3480
W--> 173 aacctgtacc tctgttanat tgaaacttgt ctctactgtc tttttatttc aaacacagct 3540
W--> 174 tattaggtgt ctctcaaccc atcaaacnca caatctgagt ctttaggaga ttgctttgaa 3600
W--> 175 tttgtgctat tgacttatat ntatatnaaa tntgtaaatg tttggtaaaa atatcatcat 3660
W--> 176 gtacnttttc ataattacgc tatntncaca tgatatatgt cagactctgg aaatatgcat 3720
W--> 177 gccacagaca cgtgttttct gcctaaaggg gctgatggaa gacncacata cnaatagacg 3780
W--> 178 attgcagtag aatgagagtg gtggtctaen cagtacatgt cctgatgttg ctcggacagt 3840
W--> 179 tactacncca agagtacccc ctgcattgtc agggtagca tctcctggaa gcctcatgta 3900
180 aatgaagaat ttcagtctcc atccaggacc taatgaataa gaatctgcat ttagcaaga 3960
181 cctcatatg attcatatac actttttttt ttttttttta gatggagtct cactctgttc 4020
182 gccaggtctg gagtgcattg gcatgatctt ggctcactgc aacctctgcc tcccggttc 4080
183 aagtattct cctgtctcag cctccctagt agctgggact acaggtgcat gccacagtg 4140
184 ctggctaatt tttgtatttt tagtagagac agggtttcac cattttggtc aggtggtct 4200
185 tgaactcatg acctccggtg attccccgc ctcggcttcc caaagtgtg ggattacaga 4260
W--> 186 catgagccac cacaccgcc ttattcgtat acncatttaa ttctgagaag cactctatag 4320
187 aaaataagaa taagaaaata ttgggtcac aggtgacatt aataagtaac tttatcgagt 4380
188 accccaaatt ttacctatgt ttggaagatg gggttaaaag gacacattga aaacaagaac 4440
189 tcattgtggc ttttttttcc tcctttttga acagttttct atttctggaa tgtgtcaat 4500
190 tatacttgaa aggagaaatg caacatatct ggtgagttgc cgtttctgt cttgtccat 4560
191 ccttgaaaag ataagaagaa cagagtttta agagtcttaa gggaaacaca tcttgtctc 4620
192 ctatattact tgtgaatgtg gatatatgat tttgtttcaa tctattttgt gtcctaaggc 4680
193 tttttgcaac agaagttgga tatatcatta gaaacataaa ttgtaccatt taacatacat 4740
194 gaagtttatg tttaccttga cgttcttcta aaaagtgtcc tacaccggca ttgtccttgt 4800
195 aggcattatc acatgatcaa ataaaaaat tagttttcaa ttaaggagaa tatttgagga 4860
196 aagaccgtac gtgttcattg ggttcctgaa ggcagtcag tgagaaagta atatatgctt 4920
197 cattaaacaa tgcggacatt ttcagggttt ccctttttta ccaaaatttg gaagcaatgt 4980
198 ggaatttact ggatgcatcc agcctgaaa tgaagatagg tttattgaat gtgccagcaa 5040
199 gtgcaggccc aggtctgagt gttcttcatt attatcaggt gagaggaagc ctgggagcaa 5100
200 acactgccag cagcatagct gggggaacgg gaattaccat cctgatcatc aacctgaaga 5160
201 agagcttggc ctatattcac atccacagtt gccagaaatt ttttgagacc aagtgcctta 5220
202 tggcttcctt ttccactgta tgtatttttt tttgtgtggg aagactaaga tctgggtcc 5280
203 taatgtaagt aagaagccct cttctcctgt tccatgaaca ccatcctttt ctgtaacctc 5340
204 tattacacag tatagtgtgt ctgtaagttc acacagccca gggagatgct ggctgccac 5400
205 tcccccaac ccaggcaaat tctcgggggt taaagttatc tactgcaagt gacgatctct 5460
206 gggtttttct gtgcctgtgt ttgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtatgtgtca 5520
207 ctttaaaagg actggtcaga tggtagggag atgaaaacag gagatgctat aagaaaataa 5580
208 acttttgggg cgaataccaa tgtgactctt tttgtttgtc atttgttgct gttcaatagg 5640
209 aaattgtagt gatgatgctg tttctcacca ttctgggact tggtagtgct gtgtcactca 5700
210 caatctgtgg agctggggaa gaactcaaag gaaacaaggt agatagaagc ccgatataaa 5760
211 atcttgaatg acagggttaac gaattggagc tttattcctt aaaatatggc ctgggttttc 5820
212 tgaacatttt cttccagaaa atagtttctc caagttttat tactttggtt tacaaatctc 5880
213 acatttaaat cacattttat accataagta gcacacattt cataatattc ctctgaatga 5940
214 gggttgggat aataggactg atatgttaga aatgccttaa agtgtgtgga gcatgagaga 6000
215 tggatgtaca gaaggcttgt gaggaaccca cccaggtatc tggccttggt ttctgcccc 6060
216 gaactagccg cctattcctg tttctgtttt attcctttgt ttcttgactt ttctttcca 6120
217 acttgcctca aaacctcagt tttctttcct ttctgattca tgactaccaa atgttttcac 6180
218 ttgcctcacc cgtccattac acctttgata agaaccacca gacctgtgc tcatgtactt 6240
219 gcccatgtct gatggaagaa acatactctc tccatctgtc cactttcctg aggcattcaa 6300

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/889,866A

DATE: 05/13/2002

TIME: 14:59:57

Input Set : A:\MWH0008rev.APP.txt

Output Set: N:\CRF3\05132002\I889866A.raw

```

220 gtctagccac cttttaaaat cactctcctc caggctgggc acggtgtcac gcctgtaatc 6360
221 tcagcacttt gtgaggctga ggaggcgga tcacttgaag tcaggagttc aaaaccagcc 6420
222 tggccaaatg gcaaaaaccaa atcttcttca attataacca aatctttaa ccaatctcta 6480
223 ctaaaaaata caacaaaaca aaacaacaac aacaaaaaca gaaaaggaaa cattagccca 6540
224 gogtgggtggc aggtacctga ggttccagat acttgggagg ctgaagcagg agaatcgctt 6600
225 gagcccaaga gatggaggtt gcagtgaagg gagatcatgc cactgcacca cagccagggt 6660
226 gacagagcca tacttcccag cacattggga ggccaaagct gaagaataat ttgaggtgag 6720
227 gatttggaga ccagcctggc caacatgggt aaactccgtc tgtactaaaa atataaaact 6780
228 tagtggggca tgggggcaca cacctgtaat ttcagctact taggaggctg aggcaggaga 6840
229 attgcttgaa cccgggaggg ggaagttgca gtgagccaag atcgtggcca ctgcactcca 6900
230 gcctgggtga catagtga tctgtctca aaaaaataa aagaaattta aaaaatcact 6960
231 ctcttccaaa gatagataa taagacagca gatatactaa ggaataacct caccaacttg 7020
232 tcattgactg acatgatttc ttttggccca cttggccagc tagtctggtt tggttttctg 7080
233 gaaatgaaag aaataatcag agtttaatga cagagagcgt gagaccaga aagacaaaag 7140
234 tagatgaggt aagtctcttg agcgagactt ctagggatgg gaaatttggt gtgattgata 7200
235 tgaatgattt tttcccttat caggttccag aggatcgtgt ttatgaagaa ttaacatat 7260
236 attcagctac ttacagtga ttggaagacc caggggaaat gtctctccc attgatttat 7320
237 aagaatcacg tgtccagaac actctgatcc acagccaagg atccagaagg ccaaggtttt 7380
238 gtttaaggggc tactggaaaa atttctatcc tctccacagc ctgctgggtt tacattagat 7440
239 ttattcgctt gataagaata ttttgtttct gctgcttctg tccaccttaa tatgctcctt 7500
240 ctattttagt atatgataga ctctattttt tcttgtttta tattatgacc acacacatct 7560
241 ctgctggaaa gtcaacatgt agtaagcaag atttaactgt ttgattataa ctgtgcaaat 7620
242 acagaaaaaa agaaggctgg ctgaaagtgt agttaaactt tgacagtttg ataattttg 7680
243 gttcttaggg tttttttttt ttttagcatt cttaatagtt acagttgggc atgatttgta 7740
244 ccatccaccc ataccacac agtcacagtc acacacacat atgtattact tacactatat 7800
245 ataacttctt atgcaaatat tttaccacca gtcaataata catttttgcc aagacatgaa 7860
246 gttttataaa gatctgtata attgcctgaa tcaccagcac attcactgac atgatattat 7920
247 ttgcagattg acaagtagga agtggggaac ttttattaag ttactcgttg tctggggagg 7980
248 taaataggtt aaaaacaggg aaattataag tgcagagatt aacatttcac aaatgtttag 8040
249 tgaaacattt gtgaaaaaag aagactaaat taagacctga gctgaaataa agtgacgtgg 8100
250 aaatggaaat aatggttata tctaaaacat gtagaaaaag agtaactggt agattttggt 8160
251 aacaaattaa agaataaagt tagacaagca actggttgac taatacatta agcgtttgag 8220
252 tetaagatga aaggagaaca ctggttatgt tgatagaatg ataaaaaggg tcgggcgcgg 8280
253 aggctcacgc ctgtaatccc agccctttgg gaggccgagg tgggcagatc acgaagtcag 8340
254 tagtttgaga ccagcctggc caacatagtg aaaccccgct tctactaaaa atacaaaaaa 8400
255 aaaattagct ggggtggttg gcagtcacct gtagtcccag ctacttggga ggatgaggca 8460
256 ggagaatcgc ttgaacctgg gaggcggagg ttgcagtga ccgagatcgc accagtgcac 8520
257 tccagccttg gtgacaatgg gagactccat ctcaaaaaaa aaaaaaaata aaaaagata 8580
258 aaaagtcaga aatctgaaaa gtggaggaag agtacaataa gacctaaatt aagtctcatt 8640
259 ttttggcttt gattttgggg agacaaaagg aaatgcagcc atagagggcc tgatgacatc 8700
260 caatacatga gttctggtta agataaaatt tgatacacgg tttggtgtca ttataagaga 8760
261 aatcattatt aatgaagca agttaacact ctaagagaat tattttgaga tagaagtga 8820
262 gctaagctaa acttcacatg cctataattg gagggaaaaa ctaaggataa aatctagcct 8880
263 agaagataca ataattagtc ataaacatgc attgtgaaac tgtagagagc aggtagccca 8940
264 aaatagagaa agattagata aagagaaaaa agtatccat cagagacagt atctctaggc 9000
265 ttgggcaaga gaaaagtcca cagtataag caactccacc taaggcatga atatcgagg 9060
266 gagaaaacag caatagtga tgaatgcaa aggtgctgag caaattccac acatgagtat 9120
267 tgtgcatgag taaatgaata aaacatttgc aaagacctt agagaaagag aatgggagca 9180
268 tatgtgcgaa ataagatagt tgattatgaa tagaaggtag tgaagaaaag caagctaaga 9240

```

→ Use of n and / or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to ensure a corresponding explanation is present in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/889,866A

DATE: 05/13/2002

TIME: 14:59:58

Input Set : A:\MWH0008rev.APP.txt

Output Set: N:\CRF3\05132002\I889866A.raw

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:164 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:174 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:177 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:178 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:179 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:186 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:302 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1